

4

Identification of Suitable Sites

Benefits, potential limitations, and additional design considerations were identified for each FCS based on the Group 1 (engineering criteria), Group 2 (other considerations) and Group 3 (site-specific criteria) evaluations. The overall suitability of the FCSs to have a sediment processing/transfer facility (including rail yard facility) constructed and operated on-site has been the basis of the evaluation performed. While there are many similar considerations associated with each site, the magnitude of potential issues, as well as the differences among the FCSs, resulted in an overall determination of suitability.

Suitable Sites are defined as those sites that exhibit characteristics that satisfy the minimum requirements for designing, constructing, and operating a sediment processing/transfer facility to the standards established by the project. Suitable Sites meet enough of the needs of a facility that it is currently considered feasible in the design process to address the identified potential limitations and additional design considerations.

Although the PCS evaluation had centered on a site's total acreage, it became apparent once areas were delineated as useable (during the FCS evaluation) that adequate useable acreage was an important consideration. This approach was supported by the RD Team. In particular, the RD Team provided input on the acreage required for the processing facility (5 acres for mechanical processing and 15 acres for hydraulic processing) and rail yard facility (15 to 25 acres). Additionally, the RD Team concurred that some sites (based on the importance of their location) could be used even though rail appeared to be a limitation. The limitation of rail at those sites could be addressed in design by transporting sediment off-site by barge.

It is important to note that access easements may be needed to implement the remedy (e.g., access points to the river, areas for the hydraulic pipeline, areas for hydraulic booster pumps, backfill staging areas, and additional rail car operation areas). During the design process, the need for additional access easements may also be identified for acceptable facility access roads. These other easement issues will be addressed by the RD Team.

4. Identification of Suitable Sites

The following is a summary of the suitability information on the FCSs and conclusions regarding the status of each as a Suitable Site.

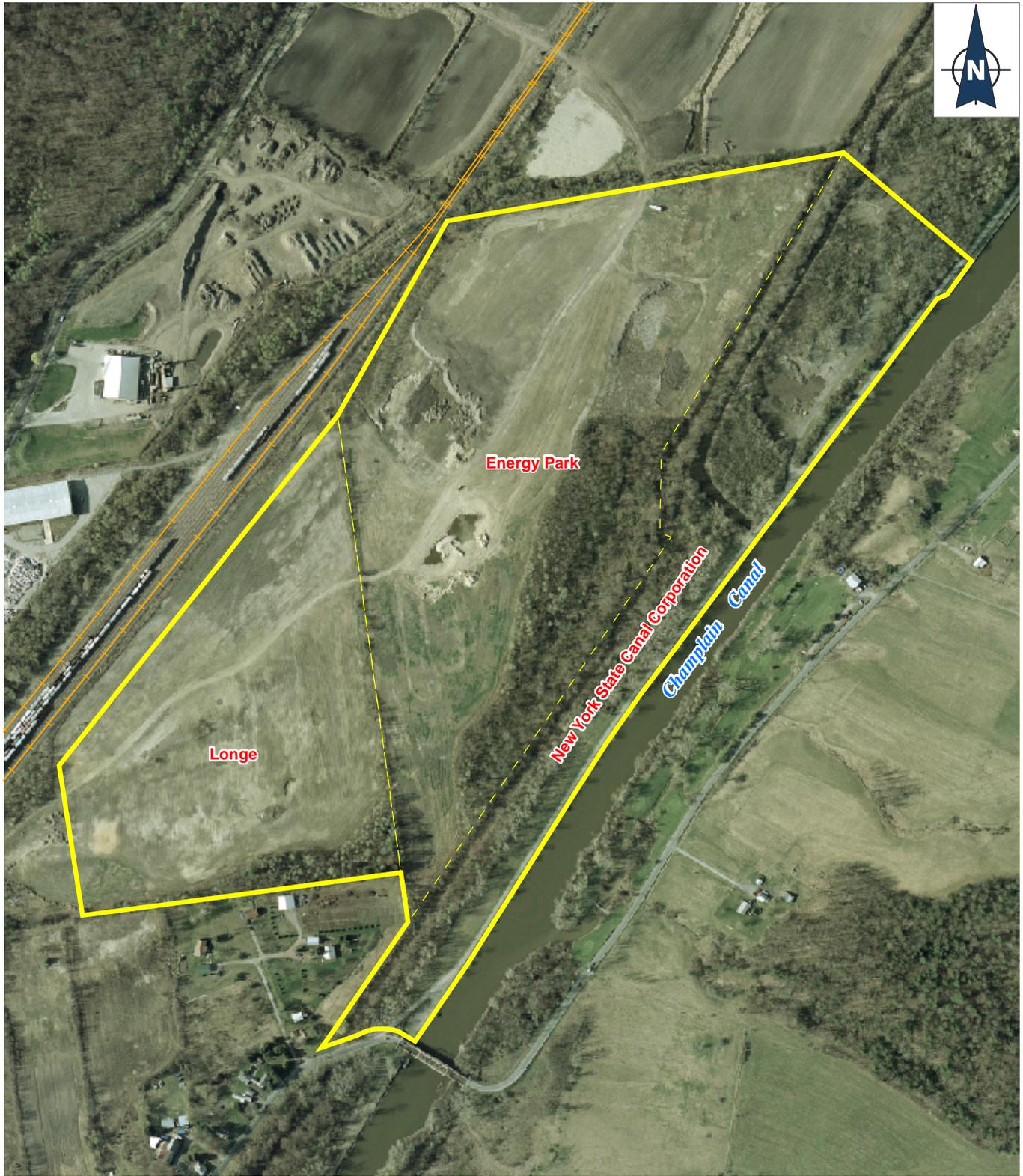
4.1 Energy Park/Longe/NYSCC

This site has many suitable characteristics/benefits: the Energy Park and Longe properties are classified as vacant industrial; the site is close to dredge areas in River Section 1 (where approximately 59% of the dredging will occur); the useable acreage is sufficient to construct and operate sediment processing/transfer and rail yard facilities; there is direct access to an active Canadian Pacific Rail line and an existing off-site rail yard (Fort Edward Rail Yard) adjacent to the site that may provide additional rail-car-storage space; the site has suitable area (adequate length and width) and flat topography to optimize the layout of the sediment processing/transfer facility and rail yard; and the site is owned by interested landowners. In addition, this site could support either hydraulic or mechanical dredging operations through construction of a waterfront facility and/or a pipeline along the NYSCC property. As determined by the floodplain assessment, this site is not likely to experience major flooding because it is outside the 100-year floodplain. The RD Team indicated that borrow material is located on-site and may provide backfill for dredged areas and/or other project-related construction needs.

There are some potential limitations and additional design considerations at this site. These include location on the Champlain Canal, 1.4 miles above Lock 7, where the canal is about 150 feet wide (allowing one barge passage in one direction). In addition, there are issues associated with developing project-related waterfront needs. However, a berthing area and turning basin could be designed and developed. Movement of the dredged sediments in and out of the facility by barge will require passing through Lock 7. Subsurface conditions at the waterfront also may include poor foundation-bearing material, and it may be necessary to relocate the Lock 8 access road if waterfront facilities are constructed.

As indicated in previous sections, the proximity of this site to a large percentage of the dredge material suggests that hydraulic and/or mechanical dredging could be options. The RD Team will be evaluating the use of these dredging options and the resulting effects on design, transportation efficiencies, and dredging productivity. Depending upon the dredging design, the project may require access to additional parcels along the Champlain Canal between the Energy Park/Longe/NYSCC site and Lock 7 at the Hudson River. Access may be needed for running a pipeline along the canal and for pumps and for monitoring and maintenance activities, and the potential need to offload larger-sized debris.

Further examination and delineation of the site expanded the site boundaries in the southwestern portion of the site, adding the NYSCC parcel that extends to East Street. This increased the overall site area by approximately 2.3 acres for a total of approximately 106.2 acres (see Figure 4-1).



LEGEND

-  Approximate Site Boundary
-  Tax Parcel Boundary
-  Railroad



Figure 4-1
Energy Park / Longe / New York State Canal Corporation
Suitable Site



4. Identification of Suitable Sites

In conclusion, because the benefits outweigh the potential limitations and additional design considerations at the Energy Park/Longe /NYSCC FCS, it has been proposed as a Suitable Site.

4.2 Old Moreau Dredge Spoils Area/NYSCC

This site has several suitable characteristics/benefits: the Old Moreau Dredge Spoils property is classified as vacant industrial; the site is directly on the Hudson River and close to dredge areas in River Section 1 (where approximately 59% of the dredging will occur); the site has adequate river frontage; useable acreage is marginally sufficient to construct and operate sediment processing/transfer and rail yard facilities; there is direct access to an active Canadian Pacific Rail line; an existing off-site rail yard (Fort Edward Rail Yard) 1 mile north of the site may provide additional rail-car-storage space; and the property is owned by an interested landowner. In addition, sediments from hydraulic dredging operations could be transferred to the site by pipeline. Much of the sediment in the upper part of the river may be dredged hydraulically and transported by pipeline, and the pipeline would be constructed along the river and used to transport hydraulically dredged sediment to the site. As determined by the floodplain assessment, this site is not likely to experience major flooding because a majority of the site is outside the 100-year flood plain.

There are some potential limitations and additional design considerations at this site: Dredge spoils disposal and historic uncontrolled filling/dumping on-site have resulted in surface and subsurface soil, surface water, sediment, and possible groundwater contamination at the site, resulting, in turn, in the need for possible additional site characterization at the facility footprint location; this portion of the Hudson River is highly depositional and extensive initial and annual navigational dredging may be required to allow for vessel or barge movement; and dredge spoils and fill material throughout the site would present geotechnical concerns about support for foundations, possibly requiring terracing, and site roadways that would require an extensive subbase. In addition, there may be issues with optimizing the construction of both the sediment processing/transfer and rail yard facilities at this site (due in part to limited useable acreage), and the design may have to consider either barging processed material to another rail load-out site or staging rail cars at the nearby Fort Edward Rail Yard.

In conclusion, while the potential limitations could cause this site to be used only as a sediment processing/transfer facility with off-site rail storage or barging of processed material to another rail load-out site, there are enough benefits that outweigh the potential limitations and additional design considerations at the Old Moreau Dredge Spoils Area/NYSCC FCS that it has been proposed as a Suitable Site.

4.3 Georgia Pacific/NYSCC

This site has some suitable characteristics/benefits: the Georgia Pacific property is classified as vacant industrial; the site is directly on the Hudson River with

4. Identification of Suitable Sites

adequate river frontage; it is close to dredge areas in River Section 2 (where approximately 22% of the dredging will occur); existing bulkhead on-site was noted during site-specific field investigations to have a water depth of about 10 feet, appearing to provide sufficient depth for barge offloading and loading operations; the property is owned by an interested landowner; and the useable acreage is sufficient to construct and operate only the sediment processing/transfer facility, but not a rail yard facility.

There are some potential limitations and additional design considerations at this site that affect suitability: the site does not meet the anticipated rail yard footprint requirements (15 to 25 acres) due to lack of the available space on-site; there are challenges associated with some areas on-site due to hilly topography; and there is a landfill on the eastern parcel. In addition, concerns were expressed at a Public Forum regarding a mobile home park to the north of the site. Information from the RD Team indicates that the Batten Kill Railroad (the only rail line with access to the site) may not be able to handle the loads associated with loaded rail cars; up to 20 miles of railroad may have to be rehabilitated and the site is located 32 miles from a major rail carrier. Rail is further limited by the orientation of existing rail to the property and lack of useable acreage for a rail yard. The likely location of the sediment processing/transfer facility may overlie a potential historic archaeological site requiring further investigation; extensive fill material and other subsurface conditions would possibly require piling foundations, and roadways would require an extensive subbase. The site is separated by County Road 113 and the movement of material or personnel may be a design consideration relative to road use.

In conclusion, the issues relating to the development and operation of a rail yard facility and the need to rehabilitate up to 20 miles of rail are considered to be site limitations. Other considerations that limit the suitability of the site are the location and potential extent of a historic archaeological area, geotechnical concerns, the potential need to cross County Road 113, and the need for constructing a subbase for roadways. Therefore, as the potential limitations and additional design considerations outweigh the benefits at the Georgia Pacific FCS, it has not been proposed as a Suitable Site.

4.4 Bruno/Brickyard Associates/Alonzo

This site has many suitable characteristics/benefits: the Bruno and Alonzo properties are classified as rural vacant, and Brickyard Associates is classified as storage, warehouse, and distribution property; the site is directly on the Hudson River with adequate river frontage; it is in River Section 3 where approximately 19% of the dredging will occur; the useable acreage is sufficient to construct and operate sediment processing/transfer and rail yard facilities; and the site is directly served by GRS, which would participate in joint line movements with other rail companies (NS and CSX), providing additional transportation flexibility to and from the site.

4. Identification of Suitable Sites

There are some potential limitations and additional design considerations at this site: the train bridge located upstream and near the site has a low vertical clearance, and proper clearance and depth of the navigation channel depends on the water level adjustment within the pool containing the site, made at the Upper Mechanicville Dam and controlled by New York State Electric and Gas Corporation. Possible vessel congestion along the frontage of the site could occur due to its proximity to Lock 3. These factors will have to be considered in the barging of material to and from the site. In addition, further cultural resource studies need to be completed. The area along the waterfront (the Alonzo parcel) is in the 100-year floodplain. The elevation difference between the riverfront and the anticipated area of the processing facility is also a design consideration. Because the site is separated by Knickerbocker Road, the movement of material or personnel may be a design consideration relative to road use.

The Hudson River in the vicinity of this site has been identified as a known wintering area for the bald eagle. The potential for affecting the bald eagle habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on bald eagle habitat.

In conclusion, since the benefits outweigh the potential limitations and additional design considerations at the Bruno/Brickyard Associates/Alonzo FCS, it has been proposed as a Suitable Site. In addition, this site offers the flexibility to be used for a sediment processing/transfer facility, with barging to another rail load-out facility, or it could be used solely as a rail load-out facility.

4.5 New York State Canal Corporation/Allco/Leyerle

This site has some suitable characteristics/benefits: it is directly on the Hudson River with adequate river frontage; the NYSCC and Leyerle properties are classified as other rural vacant lands, and Allco is classified as commercial vacant land with minor improvements; the site is in River Section 3 where approximately 19% of the dredging will occur; the useable acreage on the western portion of the site is sufficient to construct and operate sediment processing/transfer and rail yard facilities; and the site has direct access to Canadian Pacific Rail, which could provide transportation services to and from the site.

There are some potential limitations and additional design considerations at this site: U.S. Highway 4/State Route 32 separates the shoreline/eastern parcel (NYSCC) from the inland/western parcels (Allco and Leyerle), requiring design and construction of a conveyor system either over or under the road. Similar to the Bruno/Brickyard/Alonzo site, using this site may involve a processing facility with barging to a rail load-out facility at another location. That option may reduce the potential traffic issues associated with crossing U.S. Highway 4/State Route 32. There are some shallow river areas close to the site that may require extensive initial and potential annual navigational dredging. Other design considerations for this site include shallow river conditions along the waterfront, rough

4. Identification of Suitable Sites

topography along the eastern part of the site, and topographic differences between the waterfront and the area anticipated to be used for the processing facility.

The Hudson River in the vicinity of this site has been identified as a known wintering area for the bald eagle. The potential for affecting the bald eagle habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on bald eagle habitat.

In conclusion, because the benefits outweigh the potential limitations and additional design considerations at the New York State Canal Corporation/Allco/Leyerle FCS, it has been proposed as a Suitable Site.

4.6 State of New York/First Rensselaer/Marine Management

This site has few suitable characteristics/benefits: all of the properties are classified as vacant land located in commercial areas; the site is directly on the Hudson River with adequate river frontage; the useable acreage is marginally sufficient to construct and operate only the sediment processing/transfer facility, but not a rail yard; and the site is south of the Federal Dam at Troy, where the navigational channel is deeper.

There are many potential limitations and additional design considerations at this site that affect suitability: it is not proximate to dredge areas because it is located below River Section 3; the City of Rensselaer has an approved LWRP guiding the development in the vicinity of this site, and the use of the site for a sediment processing/transfer facility may not be consistent with the approved Rensselaer LWRP. The site does not appear to meet the rail yard footprint requirements (15 to 25 acres) due to lack of the available space on-site; space available to move trains to and from the site and switch trains once cars are at the site appears to be limited; there are challenges associated with site topography due to steep slopes in the southwest portion of the site; and the floodplain assessment revealed that the site is almost entirely in the 100-year floodplain. There are some shallow river areas close to the site that may require an extensive initial and potentially periodic navigational dredging. Fill on-site poses potential additional foundation design considerations.

The Hudson River in the vicinity of this site also has been identified as a known spawning area for the shortnose sturgeon. The potential for affecting the shortnose sturgeon habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on shortnose sturgeon habitat.

In conclusion, the potential conflict with the City of Rensselaer LWRP and associated plans to develop the site for recreation are considered to be site limitations. This site is located below River Section 3 and is not near the dredge areas. The useable acreage for construction of the sediment processing/transfer facility is

4. Identification of Suitable Sites

marginal. Therefore, as the potential limitations and additional design considerations outweigh the benefits at the State of New York/First Rensselaer/Marine Management FCS, it has not been proposed as a Suitable Site.

4.7 OG Real Estate

This site has many suitable characteristics/benefits: the OG Real Estate property is classified as vacant land located in industrial areas; the site is directly on the Hudson River with adequate river frontage; the useable acreage is sufficient to construct and operate sediment processing/transfer and rail yard facilities; there is direct access to two active rail lines serviced by CSX and Canadian Pacific Rail at the Port of Albany just north of the site, providing additional transportation flexibility to and from the site; and the site is south of the Federal Dam at Troy, where the navigational channel is deeper.

There are some potential limitations and additional design considerations at this site: the site is located below River Section 3 and is not near dredge areas; the floodplain assessment revealed that the site is almost entirely in the 100-year floodplain; the majority of the site has been filled with ash from the former Niagara Mohawk power plant (located immediately to the south of the site) with deeper areas of ash fill noted within the former channel of Normans Kill, which once traversed the site and has since been rerouted. The presence of the on-site ash fill is a foundation design consideration. Due to the potential variability of the on-site fill material, further characterization of the site may be needed before facility construction.

The Hudson River in the vicinity of this site has been identified as a known spawning area for the shortnose sturgeon. The potential for affecting the shortnose sturgeon habitat will be considered in the biological assessment being prepared by EPA. The design would have to minimize the potential impact on shortnose sturgeon habitat.

The property owner has recently requested that EPA remove the site from consideration due to future development plans. It is EPA's understanding that these development plans are at the very start of the Environmental Impact Statement (EIS) process. It is also EPA's understanding that the development plan still requires, among other things, the need to secure funding, rezoning approval, construction permits from the Army Corps of Engineers, as well as traffic bridge and rail underpass construction. Given the many site-specific conditions identified in this report and the complexity of the project, the EIS and planning approval process, and the need to secure project funding would be expected to require an extensive time period. As a result of these factors, the start of construction may be up to ten years in the future. In view of this, EPA will continue to consider the property for the remainder of the siting selection process. Because development plans and EPA's potential use of the site would necessitate the construction of docking facilities, resolution of floodplains impacts, and other shared improvements, the additional time would also permit an evaluation of whether EPA's possible use of

4. Identification of Suitable Sites

the site would present a significant benefit to the long-term development of the property by resolving the complex construction obstacles.

In conclusion, as the benefits outweigh the potential limitations and additional design considerations at the OG Real Estate FCS, it has been proposed as a Suitable Site.

4.8 Suitable Sites

The following five FCSs were determined through the facility siting evaluation process to be suitable for use by the RD/RA Team as Recommended Sites:

- 1) Energy Park/Longe/New York State Canal Corporation
- 2) Old Moreau Dredge Spoils Area/New York State Canal Corporation
- 3) Bruno/Brickyard Associates/Alonzo
- 4) New York State Canal Corporation/Allco/Leyerle
- 5) OG Real Estate.